

LASER DIVIDING AND CUTTING METHOD

Patent Number: JP11224866
Publication date: 1999-08-17
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Requested Patent: ☐ JP11224866
Application Number: JP19980172163 19980604
Priority Number(s):
IPC Classification: H01L21/301; B23K26/00; B23K26/00; H01L33/00
EC Classification:
Equivalents:

Abstract

PROBLEM TO BE SOLVED: To provide a laser dividing and cutting method, capable of using an obtained division surface as the function surface of an element or a device as it is by efficiently and highly accurately dividing and cutting a single-crystal sapphire substrate.

SOLUTION: A single-crystal sapphire substrate 2 for which a planar surface is an R surface or a (c) surface and an (a) surface is provided on a side face is irradiated with a CO2 laser 1, and the single-crystal sapphire substrate 2 is divided and cut. After the single-crystal sapphire substrate 2 has been divided and cut by scanning the CO2 laser 1 on the R surface or the (c) surface in a direction vertical to the (a) surface, the divided and cut single-crystal sapphire substrate 2 is further divided and cut, by scanning the CO2 laser on the R surface or the (c) surface in a direction parallel to the (a) surface.

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